

CLAIMS

1. A projection device which projects images on a screen (S), comprising:
 - 5 a projection unit (6) which projects images on the screen based on provided image data;
 - storing units (5, 21) which store data for generating template images that have shapes set beforehand, and
 - a control unit (2) which obtains data for generating template 10 images (T1, T2, T3) from said storing units (5, 21), provides the generated image data based on the obtained data to said projection unit (6), and projects the template images to said projection unit (6).
2. The projection device according to claim 1, wherein:
 - said storing units (5, 21) store pixel information of said template 15 images (T1, T2, T3) as data for generating said template images (T1, T2, T3); and
 - said control unit (2) obtains the pixel pattern information from said storing units (5, 21), and generates said template images (T1, T2, T3) to provide to the projection unit (6), based on the obtained pixel pattern information.
3. The projection device according to claim 1, wherein:
 - 20 said storing units (5, 21) store template data (21a, 21b) for drawing ruled lines and generating said template images (T1, T2, T3), as data for generating said template images (T1, T2, T3), and
 - said control unit (2) obtains said template data (21a, 21b) from said storing units (5, 21), draws ruled lines based on the obtained template data 25 (21a, 21b), and generates data of said template images (T1, T2, T3) to be provided to said projection unit (6).
4. The projection device according to claim 3, comprising:

an indication unit (400) which indicates editing position of said template images (T1, T2, T3) projected on said screen (S), and

an input unit (7) which inputs editing content of data that corresponds to said editing position, based on the obtained editing position,

5 wherein said control unit (2) obtains information of editing position indicated by said indication unit (400), specifies data corresponding to said editing position based on the obtained editing position, obtains the specified data from the storing units (5, 21), and edits the obtained data based on the editing content that the input unit (7) input.

10 5. The projection device according to claim 4, wherein:

said storing units (5, 21) store ruled line data (21a) that define ruled lines that are to be drawn, as said template data, and

15 said control unit (2) specifies ruled line data (21a) that corresponds to said editing position, based on the obtained editing position information, and obtains the specified ruled line data (21a) from the storing units (5, 21).

20 6. The projection device according to claim 5, wherein:

said storing units (5, 21) store ruled line data (21a) including ruled line attribute information that indicates the attribute of the ruled line that is to be drawn, and

25 said control unit (2) edits ruled line attribute information including said rule line data (21a), based on the editing content that said input unit (7) input.

7. The projection device according to claim 4, wherein:

25 said storing units (5, 21) store cell data (21b) that defines a cell that is surrounded by ruled lines that form said template images (T1, T2, T3) as said template data, and

said control unit (2) specifies cell data (21b) that corresponds to said editing position, based on the obtained editing position information, and obtains the specified cell data (21b) from said storing units (5, 21).

8. The projection device according to claim 7, wherein:

5 said storing units (5, 21) store cell data (21b) that include cell attribute information indicating attribute of cells, and

said control unit (2) obtains cell attribute information including said cell data (21b) from said storing units (5, 21), edits the obtained cell attribute information, based on the editing content that said input unit (7) input, and stores 10 the edited cell data (21b) to said storing units (5, 21).

9. The projection device according to claim 4, wherein:

said indication unit (400) is for radiating spot light to said screen (S), and comprises an imaging unit (8) which carries out imaging of said screen (S), and

15 said control unit (2) controls the imaging unit (8) to carry out imaging of the screen (S) where said template images (T1, T2, T3) are projected, and said spot light is radiated, obtains position relationship of the spot light of said indication unit (400) and said template images (T1, T2, T3) from the image obtained by said imaging unit (8) carrying out imaging, and obtains editing 20 position information of said template images (T1, T2, T3) based on the obtained position relationship.

20. A projection device which projects images on a screen (S), comprising:

a projection unit (6) which projects images based on provided 25 image data to said screen (S);

storing units (5, 21) which store data for generating template images that have shapes set beforehand;

an imaging unit (8) which carries out imaging of said screen (S);
a command reception unit (7) which receives commands for
controlling said projection unit (6) and said imaging unit (8), and
a control unit (2) which provides data for generating template
5 images (T1, T2, T3) stored in said storing units (5, 21), to said projection unit (6),
in accordance with a projection command that said command reception unit (7)
received, projects said template images (T1, T2, T3) to said projection unit (6),
and controls said imaging unit (8) to carry out imaging of said screen (S), in
accordance with an imaging command that said command reception unit (7)

10 received.

11. A projection system which projects images on a screen (S), comprising:
projection devices (1, 51) which projects the images on said screen (S);
15 an image storing device (100) which stores data of images that are projected to said screen (S); wherein
said projecting devices (1, 51) comprise:
a projection unit (6) which projects images based on the provided image data to said screen (S);
20 storing units (5, 21) which store data of template images (T1, T2, T3) where the shapes are pre-set;
an imaging unit (8) which carries out imaging of said screen (S), and
a sending unit (9) which sends data; and
25 said image storing device (100) comprises:
a storing unit (103) which stores data of document images that are projected to said screen (S), and

a control unit (101) which extracts data of said document image from said storing unit (103), sends the extracted image data to the projection devices (1, 51), receives data of image sent from the projection devices (1, 51), and stores data corresponding it to data of said document image to 5 said storing unit (103).

12. An image obtainment method which projects images on a screen, comprising:

a step of projecting a template image, where a shape is pre-set to said screen, and

10 a step of carrying out imaging of said screen, where said template image is projected.

13. The image obtainment method according to claim 12, wherein said step of projecting said template image to said screen further comprises:

a step of storing data of the template image to be projected to 15 said screen beforehand, and

a step of extracting said stored data of the template image, and projecting it to said screen.